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BROWN ROT OF STONE FRUITS

S. A. Alfieri, Jr.

The brown rot disease of stone fruits was known in the United States as early as 1807 and is presently considered as the most serious disease of peach, nectarine, plum, cherry, and apricot. The average annual loss ranges from 4 to 10 per cent, but can be almost total with dollar losses running into the millions (2). In 1965, California alone sustained a loss of 13 million dollars from brown rot (3).

Brown rot is caused by the fungus Monilinia fructicola (Wint.) Honey. The fungus overwinters on infected mummified fruits which have fallen to the ground or which may have persisted on the trees. Spores produced on these infected fruits are wind-borne or splashed by rains onto newly-formed blossoms or fruits (2).

SYMPTOMS. The most conspicuous symptom of brown rot is that which occurs on the fruits; however, blossoms, twigs and limbs are also affected. The first evidence of brown rot infection on the fruit is a small, round, light brown, somewhat water-soaked spot which rapidly enlarges to encompass the entire fruit in a few days (Fig. 1A). The completely infected fruit turns dark brown, shrivels and becomes mummified (Fig. 1B). These fruits are soon covered with ashy tufts of the fungus. Infected blossoms in the spring are characterized by a cessation of growth, dwarfing, browning, and death. Blighted twigs result from infected blossoms and fruits, causing girdling and death of twigs. Limb cankers are produced from blighted twigs, resulting in cracking of the bark, gumming, and callous formation. Leaves are rarely attacked directly except when twigs are blighted, whereupon the fungus can invade the leaves.

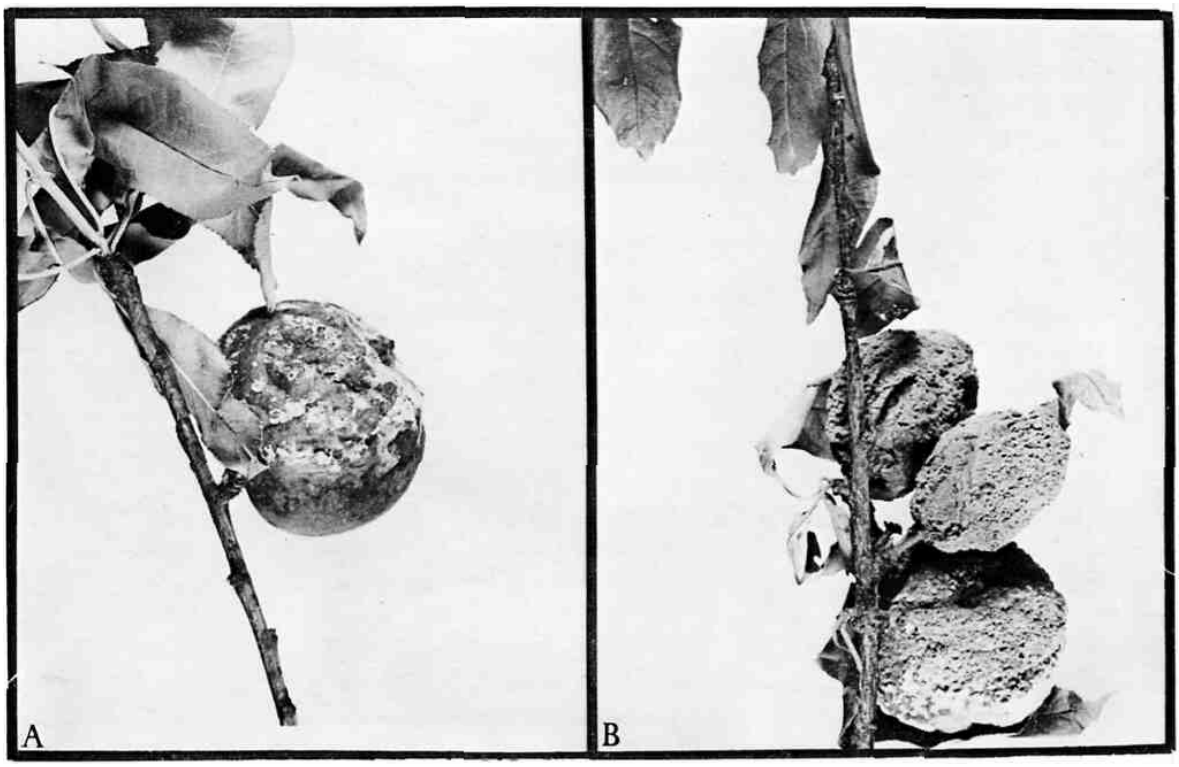

Fig. 1. Brown rot of nectarine: A) partially infected fruit; B) completely infected, mummified fruit.

CONTROL. The most effective disease control measures for this disease are the removal of rotting and mummified fruits from the trees and from the ground under the trees, plowing under the fallen mummied fruits, pruning out blighted twigs and cankered limbs, and chemical treatment of fallen mummies. Control of insects such as the curculio, which contributes to brown rot by feeding on fruits, is deemed necessary. Sulfur and captan are the fungicides most generally recommended for control of brown rot. The number of applications varies from 7 to 10 depending on location and seasonal weather (1).

Literature Cited

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